



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,390	01/22/2002	Kurt Haeuslmeier	951/50738	6968

23911 7590 10/19/2004

CROWELL & MORING LLP
INTELLECTUAL PROPERTY GROUP
P.O. BOX 14300
WASHINGTON, DC 20044-4300

EXAMINER

SPISICH, GEORGE D

ART UNIT	PAPER NUMBER
----------	--------------

3616

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/051,390

Applicant(s)

HAEUSLMEIER ET AL.

Examiner

George D. Spisich

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,7-10 and 12-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 is/are allowed.
- 6) ☒ Claim(s) 1,2,7-10,12 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 7-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iyoshi et al. (USPN 6,572,142) in view of Steffens, Jr. et al. (USPN 5,626,359).

Iyoshi et al. disclose inflator in an airbag system for a vehicle having sensors that detect at least one of an accident-specific variable and a person-specific variable. The reference discusses the adjustability of the inflator due to at least the severity of the impact.

The system of Iyoshi et al. has an airbag and a deployment arrangement adapted to fill the airbag with gas when the deployment arrangement interprets an event as an impact against an obstacle. The deployment arrangement includes an independently deployable first chamber (8) and second chamber (9).

The first chamber (8) is capable of filling the airbag with a smaller quantity of gas than the second chamber (9) and the deployment arrangement is configured to

Art Unit: 3616

determine whether to deploy the first or second chamber first on the basis of an evaluation of the at least one accident-specific and person-specific variable.

As discussed in col. 2, lines 55-61, the firing of one of the chambers after the other can be separated by a delay which is determined on the basis of the severity and nature of the crash. This is done to tailor the inflator to the sensed conditions and severity of the crash.

In col. 3, lines 7-18, it is discussed that the order of inflating the chambers (small chamber first and then second chamber, or second chamber first and then first chamber) can be changed as necessary (col. 3, lines 9-10). This is done to properly customize the inflation characteristics of the inflator and the airbag system depending on sensed characteristics such as the severity of the crash.

However, Iyoshi et al. do not disclose the sensors for actual and relative vehicle speed, crash angle and severity, and the body size, body weight of the occupant and sitting position and out of position condition of the occupant.

Steffens, Jr. et al. disclose an airbag with plural inflation stages and the stages are controlled based on sensed person-specific variables (see col. 11, lines 1-20) that include detecting the body size, body weight, the sitting position and out of position of the occupant. Sensors 80, 84 and 86 sense the position of the occupant and this position is used as one of the parameters considered in the control of the airbag. As this position is used, it includes what is "out of position".

Furthermore, Steffens, Jr. et al. disclose vehicle accident specific variables (again see col. 11, lines 1-20) that include precrash speed, crash severity, crash

Art Unit: 3616

direction. The crash direction that is sensed is considered a crash angle. Also, Steffens, Jr. et al. discloses using radar to determine crash severity. This is using to detect an oncoming object and determines relative speed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the airbag deployment arrangement of Iyoshi et al. by sensing the vehicle and person specific variables as taught by Steffens Jr. et al. so as to properly adjust the inflation characteristics as desired to improve the operation of the airbag arrangement of Iyoshi et al.

Response to Arguments

With respect to Applicant's argument that Steffens, Jr. et al. (cited prior art) does not show determining the person specific variables based on the four variables claimed, Examiner disagrees. Steffens Jr. et al. teaches all of the variables claimed and takes into account this information to determine the necessary inflation.

With respect to Applicant's argument that Steffens, Jr. et al. recite actual and relative vehicle speed, Examiner disagrees. As stated in the rejection, the use of radar to detect oncoming objects provides for the relative vehicle speed which is considered in addition to actual vehicle speed and crash direction (crash angle) to determine necessary inflation.

Furthermore, Steffens, Jr. et al. teaches the use of these variables in combination.

Allowable Subject Matter

Claim 13 is allowed.

Prior Art does not disclose an airbag system that inflates based on the evaluation of each of a crash angle and crash severity each being determined as a function of vehicle type, the actual vehicle speed and relative vehicle speed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


Art Unit: 3616

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to George D. Spisich whose telephone number is (703) 305-6495. The examiner can normally be reached on Monday to Friday 9:30-7:00 except alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (703) 308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


George D. Spisich
Examiner
Art Unit 3616

Gds
October 14, 2004


PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600